

US EPA ARCHIVE DOCUMENT



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 6

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DALLAS, TX 75202-2733

MAY 15 2012

Ms. Dena Taylor
Senior Environmental Specialist
Targa Midstream Services LLC
10319 Hwy 146
Mont Belvieu, TX 77523

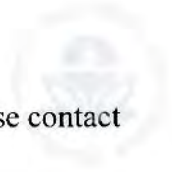
Subject: Incompleteness Determination for the Targa Midstream Services Mont Belvieu Plant Train 5 Greenhouse Gas Prevention of Significant Deterioration (PSD) Permit Application

Dear Ms. Taylor:

This letter is in response to your Greenhouse Gas (GHG) Prevention of Significant Deterioration (PSD) permit application dated March 20, 2012 and received in our office on March 26, 2012. After an initial review of your application we have determined it is incomplete and additional information is necessary in order to begin the processing of the permit. Enclosed is a list of the information required.

Upon the receipt of this information, the Environmental Protection Agency (EPA) will begin the process of developing a Statement of Basis and rationale for the terms and conditions for a draft PSD permit. As we develop our preliminary determination and draft permit, it may be necessary for the EPA to request additional clarifying or supporting information. Supplemental information on one or more parts of the application may be required before we can propose a draft permit. If the supporting information substantially changes the original scope of the permit application, an amendment or new application may be required.

While not required for the completeness determination, the EPA may not issue a permit until it has been established that the issuance of the permit will have no impact on endangered species pursuant to Section 7 of the Endangered Species Act. In addition, the EPA must complete a consultation in accordance with Section 106 of the National Historic Preservation Act. To expedite these consultations, the EPA requests that the permit applicants provide a biological assessment and cultural resources report covering the project and action area. We request that you submit this information as early as possible, so that the EPA may issue a permit at the earliest possible time, and within the timeframes required by statute.



If you have any questions regarding the review of your permit application, please contact Aimee Wilson of my staff at (214) 665-7596 or wilson.aimee@epa.gov.

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Sincerely yours,

Carl E. Edlund, P.E.
Director
Multimedia Planning and
Permitting Division

cc: Mr. Mike Wilson, P.E., Director
Air Permits Division
Texas Commission on Environmental Quality

Enclosure

EPA Comments on Targa Midstream Services LLC Greenhouse Gas Permit Application Application dated March 20, 2012

General

1. The application does not provide the production volume for the proposed new fractionation train. How many tons per year of ethane, propane, butane, and natural gas will be produced?
2. Please revise the process flow diagram, Section 6 figure 6.1, to indicate the emission point numbers (EPN) for each emission unit.
3. There is no recommended monitoring, recordkeeping, and reporting for the CO₂ emissions. Does Targa have a preferred monitoring method for the hot oil heaters or flare?
4. Will the waste gas from the amine unit and the TEG dehydrator be monitored using online instrumentation to determine the composition and the high heat value?
5. Please provide an additional impacts analysis as required by 40 CFR 52.21(o). Note that the depth of your analysis will generally depend on existing air quality, the quantity of emissions, and the sensitivity of local soils, vegetation, and visibility in the impact area of your proposed project. In your analysis, please fully document all sources of information, underlying assumptions, and any agreements made as a part of the analysis.

BACT Analysis

6. Annual ton per year emission limits, for each emission unit, are not considered BACT limits. BACT limits for GHG emission units should be output based limits preferably associated with the efficiency of individual emission units. Please propose short-term emission limitations or efficiency based limits for all emission sources. For the emission sources where this is not feasible, please propose an operating work practice standard. Please provide detailed information that substantiates any reasons for infeasibility of a numerical limit.
7. The application provides a five-Step BACT analysis for Carbon Capture and Sequestration (CCS) and concludes that the use of this technology is technically feasible for the amine units, and technically infeasible for all other emission sources. Why did

Targa not consider the use of CCS for emissions from the TEG dehydrator feasible? A cost analysis is provided for the amine units. If CCS is feasible for the TEG dehydrator, please revise the cost analysis accordingly. Please indicate the equipment needed to implement CCS, and the costs of such equipment. Also, a comparison of the cost of CCS to the current project's annualized cost needs to be provided.

8. The current BACT analysis does not appear to provide adequate information in the five-step BACT analysis for the hot oil heaters, amine unit, TEG dehydrator, flare, and fugitives. Step 2 does not provide detailed information on the energy efficiency measures for the two hot oil heaters. The heater BACT analysis on page 30, states that efficient heater design will be used. Please detail what design measures will improve the efficiency of the heaters, and how the efficiency compares to other hot oil heaters. In Step 3, the applicant should provide information on control efficiency, expected emission rate, and expected emission reductions. The applicant should provide comparative benchmark data to indicate other similar industry operating or designed units and compare the design efficiency of this process to other similar or equivalent processes. The applicant should then use this information to rank the control technologies. A comparison of equipment energy efficiencies is necessary to ensure that the most energy efficient equipment and control technology are selected. Please provide an analysis that discusses the efficiency of the heaters and why they were selected. This information is then also available to use in determining BACT limits for the emission units for which these technologies are applied in Step 5. Where appropriate, net output-based standards provide a direct measure of the energy efficiency of an operation's emission-reducing efforts. For example, the energy efficiency of the heaters should be tied to a BACT limit. This limit could be established in pounds of CO₂ per MMBtu produced or some other appropriate efficiency measure. Targa should supplement the BACT analysis to provide all necessary information required in Steps 2, 3, and 4 of the five-step BACT analysis.
9. The BACT analysis, on page 31 of the permit application, for the Amine Unit and TEG Dehydrator shows that a flare will be used to control the emissions from the waste gases. The emissions data included in the permit application indicates a 99% DRE for the flare. Please explain why a thermal oxidizer (TO) or a regenerative thermal oxidizer (RTO) was not considered as part of the BACT analysis for the amine unit and TEG dehydrator.
10. The BACT analysis, on page 29 section 11.2.1.4 of the permit application, for the hot oil heaters indicates that oxygen monitors and intake air flow monitors will be used to optimize the fuel/air mixture. Is there an optimum range of where the fuel/air mixture ratio will be maintained?

11. The BACT analyses, on pages 36 and 37 of the permit application, for fugitive emissions indicate that the TCEQ 28 VHP, LDAR program will be used, and that this program will reduce the emissions up to 97% for most components, but only 30% for flanges and connectors. However, the five-step BACT analyses requires the top control for reducing fugitive emissions and leaks be considered. Was the TCEQ 28LAER LDAR program considered in the BACT analysis? The 28LAER LDAR program achieves up to 97% reduction of emissions from flanges and connectors. What analysis was performed with respect to possible equipment designs such as welded connectors instead of flanges, monitoring of leaks from flanges, and the latest technology devices for detecting fugitive emissions? Please supplement the BACT analyses for fugitive emissions with additional details of why the 28 LAER LDAR program is either appropriate or not appropriate for this facility.

